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## Generator blackstart proves office in Folsom can function in emergency

by **Dave Christy**

An extensive test of the Uninterruptible Power Supply and emergency generator proved backup power is ready if needed for the Sierra Nevada Region's Folsom office. The office passed the test on Aug. 19, said **Jasen Strutt**, SN's Y2K coordinator.

"The test was part of our overall plan to prepare for any contingency at the end of the year," he said. "We want to be prepared if there is an interruption in power to the building. People from a number of areas—Operations, Information Systems, Maintenance and Administration—all worked together on this exercise."

In addition to the two UPS units that each provides 200 kVA for critical computers, the Folsom building has a 435-kW generator powered by an eight-cylinder 568-hp diesel engine, said **Gene Mann**, facility manager. The generator is tested on a regular schedule to ensure it is ready if ever needed.

For the test, all users shut down their desktop computers, the IS servers were suspended but not powered off, SCADA and Operations computer systems were running normally and the main breaker to the building was opened, cutting power to the building. Within one second, the generator had started and was supplying power.

All computer and building systems, such as fire, lighting, telephones, security and IS Server computer and SCADA systems were checked and all passed. For the final phase, service was brought back with the generator running. Inspections verified all systems switched back normally to our usual service power.

"Although our overall test was successful in answering many questions, we will follow up on some of our findings we discovered during the test," Strutt said. Findings included:

- ◆ Some additional emergency lighting is needed;
- ◆ Some computer area air conditioning systems and cooling ducts did not operate as anticipated;
- ◆ Electric gates, wheelchair lift and doors operated properly with the generator running, but did not operate off strictly UPS power as anticipated;
- ◆ Some minor, noncritical pieces of computer equipment were not on UPS power, which was corrected during the testing effort;
- ◆ All critical and essential Operations and IS computer systems are connected to the UPS and worked properly; and
- ◆ Testing the emergency generator and UPS systems demonstrated an emergency or power loss to the Folsom building would not affect our mission-critical operations or systems. 

